

Review Form 3

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	Ms_IJBCRR_130416
Title of the Manuscript:	Computer-aided drug design of small-molecule compounds targeting TIM-3 for cancer immunotherapy
Type of the Article	Original Research Article

PART 1: Comments

	Reviewer’s comment	Author’s Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript presents a significant contribution to the field of cancer immunotherapy by focusing on the computational identification of small-molecule inhibitors targeting TIM-3. TIM-3 has emerged as a critical immune checkpoint, playing a significant role in tumor-induced immunosuppression. By leveraging virtual screening, molecular docking, and molecular dynamics simulations, the study identifies promising candidates, particularly CID_164628526_TIM-3, as potential inhibitors of TIM-3. These findings provide a foundation for the development of novel therapeutic agents, offering an alternative to antibody-based approaches that face challenges in tumor penetration. This work addresses a crucial gap in cancer treatment strategies, emphasizing the potential of small-molecule inhibitors in enhancing immune responses.	No comments
Is the title of the article suitable? (If not please suggest an alternative title)	The current title, "Computer-aided drug design of small-molecule compounds targeting TIM-3 for cancer immunotherapy," is clear and appropriate, reflecting the study's focus on computational methods and TIM-3 targeting. However, it could be slightly refined for greater impact and specificity.	Title has been refined.

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Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	<p>The abstract is comprehensive and summarizes the study well. However, a few refinements could enhance its clarity and impact:</p> <p>Include quantitative results for the key findings, such as the binding energies and stability metrics of the compounds, particularly CID_164628526_TIM-3.</p> <p>Mention the significance of the identified compound's performance in comparison to the reference molecule YQG.</p> <p>Consider briefly addressing the broader implications of these findings in terms of therapeutic development.</p> <p>Suggested addition: "CID_164628526_TIM-3 demonstrated superior binding energy (-8.6 kcal/mol) and stable interactions, closely resembling the reference compound YQG in structural integrity."</p>	<p>Done</p> <p>Binding energy has been inserted.</p> <p>The significance has been highlighted.</p> <p>Done.</p>
Is the manuscript scientifically, correct? Please write here.	<p>The manuscript appears scientifically sound, employing robust computational techniques such as molecular docking and molecular dynamics simulations to validate findings. The methods are well-detailed, and the results align with the objectives.</p> <p>However, the following should be considered for improvement:</p> <p>Provide more detailed statistical validation of the docking and simulation results.</p> <p>Discuss any potential limitations of the computational approaches, such as the reliance on in silico models without experimental validation.</p> <p>Clarify the interpretation of fewer hydrogen bonds in CID_164628526_TIM-3 as a potential candidate, which might seem counterintuitive given the typical importance of hydrogen bonding in stability.</p>	<p>Done...see section 3.1, where we add the statistical value for the validation of our docking experiment. Also we acknowledged this is an in silico-based research (see conclusion section) and needs further work.</p> <p>We added "Although CID_164628526_TIM-3 forms fewer hydrogen bonds (0.58 on average) compared to YQG, its stable binding energy suggests a reliance on other interactions such as π-π stacking and hydrophobic contacts, which enhance stability and specificity within the TIM-3 active site"</p>
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	<p>The references are sufficient and recent, drawing from reputable sources to support the study's context and methodology. However, to strengthen the manuscript, consider including more recent reviews or primary studies (2023 or later) related to TIM-3 inhibitors and small-molecule computational design.</p> <p>But limited references only is there</p> <p>Please maximize references up to 50.</p>	<p>Thank you. We have added citations to make it up to 30....Since this is a research and not a review article, we believe this is enough.</p>
Is the language/English quality of the article suitable for scholarly communications?	Good	Good
Optional/General comments		

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PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	